

MEMORY CONTROLLER FOR HANDLING MULTIPLE CLIENTS AND
METHOD THEREOF

ABSTRACT OF THE DISCLOSURE

A method and system is provided for organizing and routing multiple memory requests
5 from a plurality of clients to multiple memories. Requests from a plurality of clients, including a
plurality of clients of the same type, such as multiple MPEG decoders, are directed to different
memory controllers by a router. The memory controllers order the client requests by requests
among similar client types. The memory controllers also order the client requests by different
client types. The ordered requests are then delivered to memory. Returned data is sent back to
10 the clients. A method of mapping motion pictures experts group (MPEG) video information for
improved efficiency is presented, wherein image information is stored in blocks of memory
referred to as tiles. Tiles are mapped in memory so that adjacent tiles only correspond to
different banks of memory.